

**The Knowledge Bank at The Ohio State University**  
**Ohio State Engineer**

**Title:** Back Matter

**Issue Date:** Apr-1933

**Publisher:** Ohio State University, College of Engineering

**Citation:** Ohio State Engineer, vol. 16, no. 5 (April, 1933).

**URI:** <http://hdl.handle.net/1811/35020>

**Appears in Collections:** [Ohio State Engineer: Volume 16, no. 5 \(April, 1933\)](#)

# REDUCED RATES . . . .

Our price for repair work **95c** per hour  
has been cut from \$1.50 to

We also sell Fixtures at Wholesale Prices.  
FOR ANY SORT OF PLUMBING CALL

1439 N. HIGH

# CARMELL

UNiversity 5694

## O. S. U. Students and Faculty . . . .

We are offering special rates again this year to all State students and faculty.

Mornings till 11 o'clock (except Saturdays, Sun. & Holidays)	25c
From 11 to 5 (except Saturdays, Sundays and Holidays)	40c
After 5 o'clock (any day)	35c
Saturday till 11 o'clock	40c
Saturday afternoon, Sunday and Holidays	60c

Caddy fees are 45c for 18 holes

Our course is very convenient to the University district and downtown.

18 HOLES

6500 YARDS

The Dublin Road Golf Club

Phone Ki. 1939

1957 DUBLIN ROAD

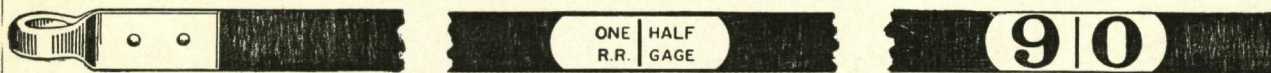
TRY OUR COURSE SOON

For Dances and Parties Call Ki. 2942

# NEW HI-WAY DRAG TAPE

FOR HEAVY DUTY ENGINEERING WORK

Here's a tape that combines in one the advantages of all other chain tapes



For body toughness, uniform temper to best avoid kinking, continued legibility of numbers and permanence of graduations, it has no equal. Cuts above are actual size.

SEND FOR CIRCULAR OR GENERAL CATALOG

106 Lafayette St., New York City **THE LUFKIN RULE Co.** Saginaw, Michigan



# G-E Campus News



## COUNTING COSMIC RAYS

We hear a lot about cosmic rays, but know little about them. Some believe the rays are the birth cries of new matter, photons, which are like light rays. Others believe they're electrons, the death rattle of matter as it radiates itself away. But whatever the rays are, they come to us from every direction, night and day.

One of our engineers, Chester Rice, a '10 grad of Harvard, didn't think cosmic rays were so mysterious. He even perfected a device to count them. Imagine — counting cosmic rays! He counts them with a nickel cylinder detector that is suspended in a low-pressure tube. It's shielded by a housing of lead, 4 in. thick, to keep out the effects of radioactive material. The rays, passing into the cylinder, initiate corona discharges, which are fed into an amplifier, then through a radio loudspeaker. The rays can be heard as distinct clicks. The small cylinder has a count of eight rays per minute.

## DNEPROSTROY

On October 10th last, the largest masonry dam ever built was dedicated in Russia. It's part of the tremendous Dneprostroy hydroelectric development.

There, Charles Thomson, who completed his engineering course in '13 at the South African School of Mines, Johannesburg, Transvaal, was honored by the U.S.S.R. He received the Order of the Red Banner of Labor for his skill. His had been the job of erecting all the

electric apparatus. And some job it was!

As a construction engineer for General Electric, he spent 18 months in Russia. He put into operation the nine enormous 77,500-kv-a. generators, five of which were built by G.E. They're the largest water-wheel generators ever built. Incidentally, it was some achievement, considering the enormous weights, to ship the G-E generators and transformers nearly 6000 miles—and then to put them into operation successfully. Even engineering veterans were astonished.



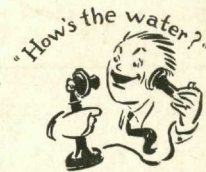
## MEET THE PHANOTRONS

Boston, proud guardian of the Beans and the Cods, has been harboring another celebrated family, lately. The name is Phanotron; present condition—that of lusty infancy; job—rectifying alternating current.

Housed in the Salem Street substation of the Edison Electric Illuminating Company in downtown Boston, this equipment is changing alternating current at 13,800 volts, 3-phase, 60 cycles, into direct current at 238 volts. Listed advantages: no moving parts, silent operation, high efficiency, economy in floor space. Six tubes, with a combined rating of 600 amperes, are employed. They are an outgrowth of the vacuum tube used in radio sets but have a current capacity 100,000 times greater.

The Phanotron rectifier, a highly desirable neighbor, comes from good old G-E stock, incubated in the Research Laboratory in Schenectady. Incidentally, Harry Stein-

er, a University of Kansas grad of '26, is largely responsible for its engineering and design development.



## HELLO, WATERWORKS

Two pumping stations which supply the Baltimore water system have no personal attendants, but they are able to give a complete report of conditions existing at the plant when called on the telephone. If you know the telephone number (and the code in which the station elects to talk back), you have only to dial the station. The G-E audible indicating equipment in the station signals how well the pumping equipment is operating, what the water level is, the pressure, etc. It gives prompt, complete, and—if you please—courteous service. The public telephone system is used, but conventional house-to-house conversations in and around Baltimore are in no way affected. Operating officials delight in demonstrating the equipment to the uninitiated, letting them listen as the pumping station makes its report. "Amazing!" is the now familiar remark.

Arthur Johnston, a '25 grad of Oregon State College, is largely responsible for this development. He also did much to develop tele-metering and the electric scoreboard.



95-987DH

**GENERAL  
ELECTRIC**

